

GAPDH Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP7873a**Specification**

GAPDH Antibody (N-term) Blocking Peptide - Product InformationPrimary Accession [P04406](#)**GAPDH Antibody (N-term) Blocking Peptide - Additional Information**

Gene ID 2597

Other Names

Glyceraldehyde-3-phosphate dehydrogenase, GAPDH, Peptidyl-cysteine S-nitrosylase GAPDH, 2699-, GAPDH, GAPD

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP7873a](/products/AP7873a) was selected from the N-term region of human GAPDH. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

GAPDH Antibody (N-term) Blocking Peptide - Protein Information**Name** GAPDH {ECO:0000303|PubMed:2987855, ECO:0000312|HGNC:HGNC:4141}**Function**

Has both glyceraldehyde-3-phosphate dehydrogenase and nitrosylase activities, thereby playing a role in glycolysis and nuclear functions, respectively (PubMed:[3170585](http://www.uniprot.org/citations/3170585), PubMed:[11724794](http://www.uniprot.org/citations/11724794)). Glyceraldehyde-3-phosphate dehydrogenase is a key enzyme in glycolysis that catalyzes the first step of the pathway by converting D- glyceraldehyde 3-phosphate (G3P) into 3-phospho-D-glyceroyl phosphate (PubMed:[3170585](http://www.uniprot.org/citations/3170585), PubMed:[11724794](http://www.uniprot.org/citations/11724794)). Modulates the organization and assembly of the cytoskeleton (By similarity). Facilitates the CHP1- dependent microtubule and membrane associations through its ability to stimulate the binding of CHP1 to microtubules (By similarity). Component of the GAIT

(gamma interferon-activated inhibitor of translation) complex which mediates interferon-gamma-induced transcript-selective translation inhibition in inflammation processes (PubMed:23071094). Upon interferon-gamma treatment assembles into the GAIT complex which binds to stem loop-containing GAIT elements in the 3'-UTR of diverse inflammatory mRNAs (such as ceruplasmin) and suppresses their translation (PubMed:23071094). Also plays a role in innate immunity by promoting TNF-induced NF-kappa-B activation and type I interferon production, via interaction with TRAF2 and TRAF3, respectively (PubMed:23332158, PubMed:27387501). Participates in nuclear events including transcription, RNA transport, DNA replication and apoptosis (By similarity). Nuclear functions are probably due to the nitrosylase activity that mediates cysteine S-nitrosylation of nuclear target proteins such as SIRT1, HDAC2 and PRKDC (By similarity).

Cellular Location

Cytoplasm, cytosol. Nucleus {ECO:0000250|UniProtKB:P04797}. Cytoplasm, perinuclear region. Membrane Cytoplasm, cytoskeleton {ECO:0000250|UniProtKB:P04797} Note=Translocates to the nucleus following S-nitrosylation and interaction with SIAH1, which contains a nuclear localization signal (By similarity). Postnuclear and Perinuclear regions (PubMed:12829261) {ECO:0000250|UniProtKB:P04797, ECO:0000269|PubMed:12829261}

GAPDH Antibody (N-term) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

GAPDH Antibody (N-term) Blocking Peptide - Images

GAPDH Antibody (N-term) Blocking Peptide - Background

GAPDH catalyzes an important energy-yielding step in carbohydrate metabolism, the reversible oxidative phosphorylation of glyceraldehyde-3-phosphate in the presence of inorganic phosphate and nicotinamide adenine dinucleotide (NAD). The enzyme exists as a tetramer of identical chains.

GAPDH Antibody (N-term) Blocking Peptide - References

Azam,S., J. Biol. Chem. 283 (45), 30632-30641 (2008)Lu,J., Biosci. Biotechnol. Biochem. 72 (9), 2432-2435 (2008)Zhou,Y., Mol. Cancer Res. 6 (8), 1375-1384 (2008)